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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,776	04/27/2001	Christian Reiter	41735	4137

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EXAMINER	
NAVARRO, ALBERT MARK	
ART UNIT	**PAPER NUMBER**
1645	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/842,776	REITER ET AL.	
	Examiner	Art Unit	
	Mark Navarro	1645	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 September 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on *20 September 2004*. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☒ Applicant's reply has overcome the following rejection(s): See attached.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☐ The a)☐ affidavit, b)☐ exhibit, or c)☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☐ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: _____.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

ADVISORY ACTION

Applicants response filed September 21, 2004 has been received and entered. Consequently, claims 54-91 remain pending in the instant application.

Claim Rejections - 35 USC § 112

1. The rejection of claims 54-91 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is maintained.

Applicants are asserting that the invention provides a method of reliably detecting an infection of an acid-resistant microorganism, particularly Helicobacter pylori in the stool by using at least two monoclonal antibodies or fragments or derivatives thereof. Applicants further assert that the recited epitopes show "a structure after intestinal passage that corresponds to a native structure or a structure which a mammal produces antibodies against after being infected. Applicants further assert that in a preferred embodiment the two epitopes are of a urease and a heat shock protein, preferably HSP 60.

Applicants arguments have been fully considered but are not found to be fully persuasive.

The claims are directed to methods for detecting an infection of an acid-resistant microorganism in stool with a monoclonal antibody or "fragment or derivative thereof."

First, Applicants assert that the invention provides a method of reliably detecting an infection of an acid-resistant microorganism, particularly Helicobacter pylori in the stool by using at least two monoclonal antibodies or fragments or derivatives thereof. However, Applicants are again directed back to their own claims, which recite methods of detection with monoclonal antibodies or "fragments or derivatives thereof." It is these derivatives which bind to unspecified antigens of unspecified structure which are being questioned. Again, the structure of the epitope is not set forth. Without guidance as to what the structure of the immunogen looks like, one of skill in the art would be hard pressed to determine which antibody derivatives are capable of specifically binding an antigen of undisclosed structure. As set forth in Rudinger et al "Peptide Hormones" edited by Parsons et al, University Park Press, June 1976, pp 1-7, especially page 6, teach that "the significance of particular amino acids and sequences for different aspects of biological activity cannot be determined a piori but must be determined from case to case by painstaking experimental study."

Second, Applicants assert that the recited epitopes show "a structure after intestinal passage that corresponds to a native structure or a structure which a mammal produces antibodies against after being infected." However, Applicants are again reminded that the rejection is set forth due to the recitation of antibody derivatives. Since the structure of the epitope is not set forth by the claims, one of skill would be forced into excessive experimentation to identify antibody fragments and derivatives which are capable of "specifically binding" epitopes of unknown structure.

Finally, Applicants assert that in a preferred embodiment the two epitopes are of a urease and a heat shock protein, preferably HSP 60. However, the claims are still directed towards antibody derivatives. The structure and binding ability of these compounds cannot be determined by those of skill in the art, accordingly, one of skill in the art would be forced into excessive experimentation to practice the instantly claimed invention.

In view of the lack of guidance, lack of examples, and lack of predictability associated with regard to producing and using the myriad of derivatives encompassed in the scope of the claims one skill in the art would be forced into undue experimentation in order to practice the broadly claimed invention.

For reasons of record, as well as the reasons set forth above, this rejection is maintained.

2. The rejection of claims 54-91 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is maintained.

The claims are directed to methods for detecting an infection of an acid resistant microorganism in the stool wherein the monoclonal antibody specifically binds an "epitope of the first antigen" and specifically binds "an epitope of a second antigen."

Applicants are asserting that the claims require that the recited epitope show "a structure after intestinal passage that corresponds to a native structure" not any epitope.

Applicants arguments have been fully considered but are not found to be fully persuasive.

Applicants assert that the recited epitope show "a structure after intestinal passage that corresponds to a native structure" not any epitope. However, Applicants are respectfully directed to the claim language which recites "an **epitope** of an antigen." (Emphasis added). This is directly addressed by the teachings of Fox (US Patent Number 4,879,213), which sets forth that "short linear polypeptides often appear not to have the ability to mimic the required secondary and tertiary conformational structures to constitute appropriate immunogenic and antigenic determinants." (See column 3). This is directly analogous to Applicants claim to an "epitope" of an antigen. An epitope is a short linear peptide obtained from a larger antigenic structure which has secondary and tertiary conformational structures. Furthermore, Applicants claims do not set forth of the structure of this epitope. Consequently, one of skill in the art would be forced into excessive experimentation to determine which epitope of unknown structure is capable of retaining a structure after intestinal passage similar enough to bind an antibody that also binds the native structure prior to intestinal passage.

For reasons of record, as well as the reasons set forth above, this rejection is maintained.

3. The rejection of claims 54-91 under 35 U.S.C. 112, second paragraph, as being indefinite vague and indefinite in the recitation of "derivative" is maintained.

Applicants are asserting that this phrase is not unclear, but rather well defined, and methods for obtaining derivatives are adequately disclosed in the specification.

Applicants arguments have been fully considered but are not found to be persuasive.

Applicants arguments are not found to be persuasive in view of the term "derivative." Derivative as defined by Dorlands Medical Dictionary 27th Edition, 1988 is a substance derived from another substance "either directly or by modification." The degree the substance can be modified and still remain under the scope of a derivative, simply cannot be determined by one of skill in the art.

For reasons of record, as well as the reasons set forth above, this rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The rejection of claims 54-57, 74 and 76 under 35 U.S.C. 102(b) as being anticipated by Larka et al is withdrawn in view of Applicants perfected claim of priority.

Claim Rejections - 35 USC § 112

5. The rejection of claims 64, 67, 73, 80, 83 & 87 under 35 U.S.C. 112, first paragraph, for lacking complete deposit information for the deposit of DSM ACC2362, DSM ACC2356, DSM ACC2355, and DSM ACC2360 is withdrawn in view of Applicants response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Navarro whose telephone number is (571) 272-0861. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on (571) 272-0864. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Navarro
Primary Examiner
April 16, 2004